



US006190372B1

(12) **United States Patent**
Racz

(10) **Patent No.:** **US 6,190,372 B1**
(45) **Date of Patent:** **Feb. 20, 2001**

(54) **CATHETER CONNECTOR**

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(*) **Notice:** Under 35 U.S.C. 154(b), the term of this
patent shall be extended for 0 days.

4,950,255	8/1990	Brown et al.	
5,053,015	10/1991	Gross	
5,188,607	2/1993	Wu	
5,234,413	*	8/1993	Wonder et al. 604/248
5,336,206	*	8/1994	Shichman 604/283
5,350,364	*	9/1994	Stephens et al. 604/167
5,366,262		11/1994	Couvreux
5,390,898	*	2/1995	Smedley et al. 604/905
5,505,714	*	4/1996	Dassa et al. 604/283
5,531,723		7/1996	Solazzo
5,603,702	*	2/1997	Smith et al. 604/256

(21) **Appl. No.:** **09/134,801**

(22) **Filed:** **Aug. 14, 1998**

(51) **Int. Cl.**⁷ **A61M 25/16; F16B 39/24;**
F16B 21/00

(52) **U.S. Cl.** **604/534; 604/905; 411/512;**
411/531; 411/161; 128/912

(58) **Field of Search** 604/30, 32-34,
604/186, 246, 248-250, 256, 283, 905,
533-537; 128/912; D24/129; 251/4, 7,
8; 411/531, 541, 544, 907, 313, 314, 533,
399, 512, 160-162; 285/2, 89, 104, 105,
109, 123.12, 123, 13, 123.14, 374, 386,
399, 405-416

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,339,549	*	1/1944	Kubaugh	411/541
2,950,944	*	8/1960	Cooney	411/531
3,449,799	*	6/1969	Bien	604/531
3,561,792	*	2/1971	Cycowicz	604/531
3,920,215	*	11/1975	Knauf	251/4
4,323,065		4/1982	Kling	
4,568,334		2/1986	Lynn	
4,615,692		10/1986	Giacalone et al.	
4,676,530		6/1987	Nordgren et al.	
4,757,662	*	7/1988	Gasser	411/542
4,769,017		9/1988	Fath et al.	
4,799,845	*	1/1989	Hrysko	411/542

FOREIGN PATENT DOCUMENTS

36 24 745 A1	2/1988	(DE)
0 666 446 A2	9/1995	(EP)
0 930 083 A2	7/1999	(EP)
2172071	9/1986	(GB)
2252380	8/1992	(GB)

* cited by examiner

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(57) **ABSTRACT**

Compressible lock washers for use in catheter connectors. One such lock washer (60) includes a support ring (62) and tube engagement flanges (64) extending centrally therefrom, oblique to the ring and each extending from the same side thereof. The tube engagement flanges (64) define a tube receptacle (72) through which a catheter tube (58) may be inserted. Upon compression of the lock washer (60), the tube engagement flanges (64) are forced toward the ring (62), decreasing the diameter of the tube receptacle (72). Thus, during compression of the lock washer (60), the tube engagement flanges (64) engage the catheter tube (58) which runs through the tube receptacle (72), securing the catheter tube within the catheter connector (20) with which the lock washer is associated.

16 Claims, 4 Drawing Sheets

